

ABSTRACT OF THE INVENTION

A process for forming an integrated circuit structure comprises forming a layer of low k dielectric material over a previously formed integrated circuit structure, and treating the upper surface of the layer of low k dielectric material with a plasma to form a layer of densified dielectric material over the remainder of the underlying layer of low k dielectric material, 5 forming a second layer of low k dielectric material over the layer of densified dielectric material, and treating this second layer of low k dielectric material to form a second layer of densified dielectric material over the second layer of low k dielectric material. The layer or layers of densified dielectric material formed from the low k dielectric material provide 10 mechanical support and can then function as etch stop and mask layers for the formation of vias and/or trenches.